

# **CLAIM AMENDMENTS**

## **Claim Amendment Summary**

### **Claims pending**

- Before this Amendment: Claims 1-23.
- After this Amendment: Claims 1-23.

**Non-Elected, Canceled, or Withdrawn claims:** 12

**Amended claims:** 1-11 and 13-23.

**New claims:** none

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## **Claims:**

**1. (Currently Amended)** ~~In an interactive operating environment a~~ A computer storage readable medium for facilitating resolution of partially unresolved input, the medium having computer executable instructions, the instructions comprising:

~~receiving a set of objects output from a prior command via an object-based command pipeline; and~~

~~processing the set of objects using an operating environment mechanism to resolve each object in the set into a data type~~

parsing a sequence of object-based commands into individual object-based commands;

associating each individual object-based command with at least one execution element;

executing each execution element associated with each individual object-based command to produce output objects, the executing act comprising processing each execution element in order of each execution element's associated individual object-based commands in the sequence of object-based commands and inputting into one or more execution elements output objects produced from one or more previously processed execution elements,

wherein the parsing, associating, and executing acts facilitate resolution of partially unresolved input.

**2. (Currently Amended)** The computer storage readable medium of claim 1, wherein the ~~set of objects is associated with a first data type and the processing by the mechanism comprises looking up a conversion for converting the first data type to the data type~~ the execution of each execution element is execution dependent upon an execution-supporting operating environment in order to actually execute and instructions further comprising resolving each object-based command in the sequence of object-based commands to a data type.

**3. (Currently Amended)** The computer storage readable medium of ~~claim 1~~ claim 2, wherein the data type is not natively supported by the operating environment, the processing ~~by the mechanism~~ further comprises retrieving extended information that defines the data type and creating an instance of the data type for each ~~object~~ object-based command in the ~~set~~ sequence.

**4. (Currently Amended)** The computer storage readable medium of claim 3, wherein the extended information comprises extended metadata and code, the extended metadata describes the data type and the code comprises additional instructions to populate the instance of the data type.

**5. (Currently Amended)** The computer storage readable medium of claim 1, further comprising receiving the sequence of object-based commands ~~a string~~ via the an object-based command pipeline, wherein the ~~string~~ sequence of object-based commands includes a wildcard and the processing ~~by the mechanism~~ further comprises producing a subset of the ~~set of objects~~ sequence of object-based commands based on the wildcard.

**6. (Currently Amended)** The computer storage readable medium of claim 1, further comprising receiving the sequence of object-based commands ~~a string~~ via the an object-based command pipeline, wherein the ~~string~~ sequence of object-based commands includes a property set and the processing ~~by the mechanism~~ further comprises identifying a plurality of properties associated with the property set and processing the ~~set of objects~~ sequence of object-based commands based on the plurality of properties.

**7. (Currently Amended)** The computer storage readable medium of claim 1, further comprising receiving the sequence of object-based commands ~~a string~~ via the an object-based command pipeline, wherein the ~~string~~ sequence of object-based commands includes a relation and the processing ~~by the mechanism~~ further comprises finding items that the ~~set of objects~~ sequence of object-based commands consume based on the relation.

**8. (Currently Amended)** The computer storage readable medium of claim 1, further comprising receiving the sequence of object-based commands ~~a string~~ via the an object-based command pipeline, wherein the ~~string~~ sequence of object-based commands comprises a property path, the property path comprises a series of components that provide navigation to a desired property of each ~~object~~ object-based command in the ~~set~~ sequence.

**9. (Currently Amended)** ~~The computer readable of~~  
~~claim 8, wherein the mechanism performs a look-up to resolve each~~  
~~component~~ The computer storage of claim 2, wherein the sequence of  
object-based commands is associated with a first data type and the  
processing further comprising looking up a conversion for converting the  
first data type to the data type.

**10. (Currently Amended)** The computer storage ~~readable~~  
medium of ~~claim 9~~ claim 8, wherein each component comprises a property  
of each ~~object~~ object-based command in the ~~set~~ sequence, a method of  
each ~~each object~~ object-based command in the ~~set~~ sequence, a field of  
each ~~each object~~ object-based command in the ~~set~~ sequence, a third party  
property, or a third party object method.

**11. (Currently Amended)** The computer storage ~~readable~~  
medium of claim 10, wherein the ~~set of objects~~ sequence of object-based  
commands is received as input to a subsequent command in the object-  
based command pipeline after processing the ~~set of objects~~ sequence of  
object-based commands ~~using the operating environment mechanism.~~

**12. (Canceled)**

**13. (Currently Amended)** The computer storage  
~~readable~~ medium of ~~claim 9~~ claim 8, wherein a component comprises a  
reference to registered code.

**14. (Currently Amended)** A computer storage readable medium for facilitating resolution of partially unresolved input, the medium having computer executable instructions, the instructions comprising:

receiving one or more parseable input objects, the input objects being output from a prior command an already processed execution element that is associated with one or more object-based commands of a sequence of commands obtained via an object-based command pipeline within an execution-supporting operating environment, the one or more parseable input objects including content that uses a data type that is not natively supported by the execution-supporting operating environment, wherein the execution of an execution element is execution dependent upon the execution-supporting operating environment in order to actually execute;

retrieving extended information that defines the data type; and

creating an instance of the data type,

wherein the receiving, retrieving, and creating acts facilitate resolution of partially unresolved input.

**15. (Currently Amended)** The computer storage ~~readable~~ medium of claim 14, wherein the one or more parseable input objects comprises a Windows Management Instrumentation (WMI) input, an ActiveX Data Object (ADO) input, an XML input, or a third party data format.

**16. (Currently Amended)** The computer storage  
~~readable~~ medium of claim 14, wherein the extended information comprises  
extended metadata and code, the extended metadata describes the data  
type and the code comprises additional instructions to populate the  
instance of the data type.

**17. (Currently Amended)** The computer storage  
~~readable~~ medium of claim 14, wherein the one or more parseable input  
objects comprises a third party object that provides an additional property  
to an object supported natively within the execution-supporting operating  
environment.

**18. (Currently Amended)** The computer storage  
~~readable~~ medium of claim 14, wherein the one or more parseable input  
objects comprises an ontology service.

**19. (Currently Amended)** A system that extends data types available to an operating environment, the system comprising:

a processor; and

a memory, the memory being allocated for a plurality of computer-executable instructions which are loaded into the memory for execution by the processor, the computer-executable instructions comprising:

~~receiving parseable input output from a prior command via an object-based command pipeline within an operating environment, the parseable input including content that uses a data type that is not natively supported by the operating environment;~~

~~retrieving extended information that defines the data type; and~~

~~creating an instance of the data type;~~

parsing a sequence of object-based commands into individual object-based commands;

associating each individual object-based command with at least one execution element;

executing each execution element associated with each individual object-based command to produce output objects, the executing act comprising processing each execution element in order of each execution element's associated individual object-based commands in the sequence of object-based commands and inputting into one or



more execution elements output objects produced from one or more previously processed execution elements,

wherein the parsing, associating, and executing acts facilitate resolution of partially unresolved input

**20. (Currently Amended)** The system of claim 19, wherein the ~~parseable input comprises a Windows Management Instrumentation (WMI) input, an ActiveX Data Object (ADO) input, an XML input, or a third party data format~~ the execution of each execution element is execution dependent upon an execution-supporting operating environment in order to actually execute and instructions further comprising resolving each object-based command in the sequence of object-based commands to a data type.

**21. (Currently Amended)** The system of ~~claim 19~~ claim 20, wherein the ~~extended information comprises extended metadata and code, the extended metadata describes the data type and the code comprises additional instructions to populate the instance of the data type~~ the instructions further comprising receiving the sequence of object-based commands via an object-based command pipeline, wherein the sequence of object-based commands comprises a property path, the property path comprises a series of components that provide navigation to a desired property of each object-based command in the sequence.

**22. (Currently Amended)** The system of ~~claim 19~~ claim 21, wherein ~~the parseable input comprises a third party object that provides an additional property to an object supported natively within the operating environment~~ the extended information comprises extended metadata and code, the extended metadata describes the data type and the code comprises additional instructions to populate the instance of the data type.

**23. (Currently Amended)** The system of ~~claim 19~~ claim 20, wherein ~~the parseable input comprises an ontology service~~ the sequence of object-based commands is associated with a first data type and the processing further comprising looking up a conversion for converting the first data type to the data type.